



Atty. Dkt. No. 056859-0189

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Arun Kumar SINHA et al.

Title: DDQ MEDIATED ONE STEP DIMERISATION OF  
BETA-ASARONE OR BETA-ASARONE RICH  
ACORUS CALAMUS OIL IN THE FORMATION OF  
NOVEL NEOLIGNAN

Appl. No.: 10/660,556

Filing Date: 09/12/2003

Examiner: Unassigned

Art Unit: 1626

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

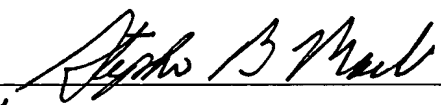

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date: March 12, 2004

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By

  
 Michael D. Kaminski  
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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: March 12, 2004 (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/660,556
				Filing Date	09/12/2003
				First Named Inventor	Arun Kumar SINHA
				Group Art Unit	1626
				Examiner Name	Unassigned
				Attorney Docket Number	056859-0189
Sheet	1	of	2		

O T P E  
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 U.S. PATENT AND TRADEMARK OFFICE

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	B1	CHAI-LIN KAO et al., "A Novel Strategy for the Synthesis of Benzofuran Skeleton Neolignans: Application to Ailanthoidol, XH-14, and Obovaten", <i>J. Org. Chem.</i> , 2002, Vol. 67, pp. 6772-6787.	
	B2	ALEJANDRO URZUA et al., "2,5-Diaryl-3,4-Dimethyltetrahydrofuranoid Lignans", <i>Phytochemistry</i> , 1987, Vol. 26, pp. 1509-1511.	
	B3	HIROKO SHIMOMURA et al., "Lignans from Machilus Thunbergii", <i>Phytochemistry</i> , 1987, Vol. 26, No. 5, pp. 1513-1515.	
	B4	<i>Journal of the American Chemical Society</i> , "Novel Nonphenol Oxidative Coupling", 1973, pp. 6861-6862.	
	B5	HIROE KIKUZAKI et al., "Phenylbutanoid dimers from the leaves of <i>Alpinia flabellata</i> ", <i>Phytochemistry</i> , 2001, Vol. 56, pp. 109-114.	
	B6	UEMURA et al., "Thallium in Organic Synthesis. 46. Oxidative Coupling of Aromatic Compounds Using Thallium (III) Trifluoroacetate. Synthesis of Biaryls", <i>J. Org. Chem.</i> , 1977, Vol. 42., pp. 764-765.	
	B7	ERIC BROWN et al., "Synthesis of (±) Podorhizone via Intermediate α-Hydroxyalkylation of a β-Benzyl γ-Butyrolactone", <i>J.C.S. Chem. Comm.</i> , 1978, pp. 556-557.	
	B8	LÁSZLÓ JUHÁSZ et al., "Simple Synthesis of Benzofuranoid Neolignans from <i>Myristica fragrans</i> ", <i>J. Nat. Prod.</i> , 2000, Vol. 63, pp. 866-870.	
	B9	ROBERT S. WARD et al., "Lignans, neolignans and related compounds", <i>Nat. Prod. Rep.</i> , 1999, Vol. 16, pp. 75-96.	

Examiner Signature	Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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	B10	MOHAMMED TAAFROUT et al., "Prestegane A, from <i>Steganotaenia araliacea</i> Hochst. : The First Natural Dibenzylbutanolide Lignan with a <i>meta</i> -Phenol – A Short Synthesis of <i>cis</i> and <i>trans</i> ( $\pm$ ) Arctigenin –", <i>Tetrahedron Letters</i> , 1983, Vol. 24, No. 31, pp. 3237-3238.		
	B11	SHOSUKE YAMAMURA et al., "Three Novel Neolignans from <u>Heterotropa Takaoi</u> M.", <i>Tetrahedron Letters</i> , No. 49, pp. 4891-4894.		
	B12	CHANG WOO LEE et al., "Inhibition of Human Tumor Growth by 2'-Hydroxy- and 2'-Benzoyl-oxy-cinnamaldehydes", <i>Planta Medica</i> , 1999, Vol. 65. pp. 263-266.		
	B13	CLARK W. PERRY et al., "Synthesis of Lignans. I. Nordihydroguaiaretic Acid", <i>J. Org. Chem.</i> , 1972, Vol. 37, No. 26, pp. 4371-4376.		
	B14	XIAOCHUAN CHEN et al., "A facile enantioselective approach to neolignans", <i>Tetrahedron: Asymmetry</i> , 2003, Vol. 14, pp. 701-704.		
	B15	SHIGETOSHI KADOTA et al., "Convenient Synthesis of Magnoshinin, an Anti-Inflammatory Neolignan", <i>Tetrahedron Letters</i> , 1987, Vol. 28, No. 25, pp. 2857-2860.		
	B16	KAISA SYRJÄNEN et al., "Regioselectivity in oxidative cross-coupling of phenols. Application to the synthesis of dimeric neolignans", <i>Tetrahedron</i> , 2001, Vol. 57, pp. 365-370.		
	B17	WENXIN GU et al., "First asymmetric synthesis of chiral 1,4-benzodioxane lignans", <i>Tetrahedron Letters</i> , 2000, Vol. 41, pp. 6079-6082.		

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